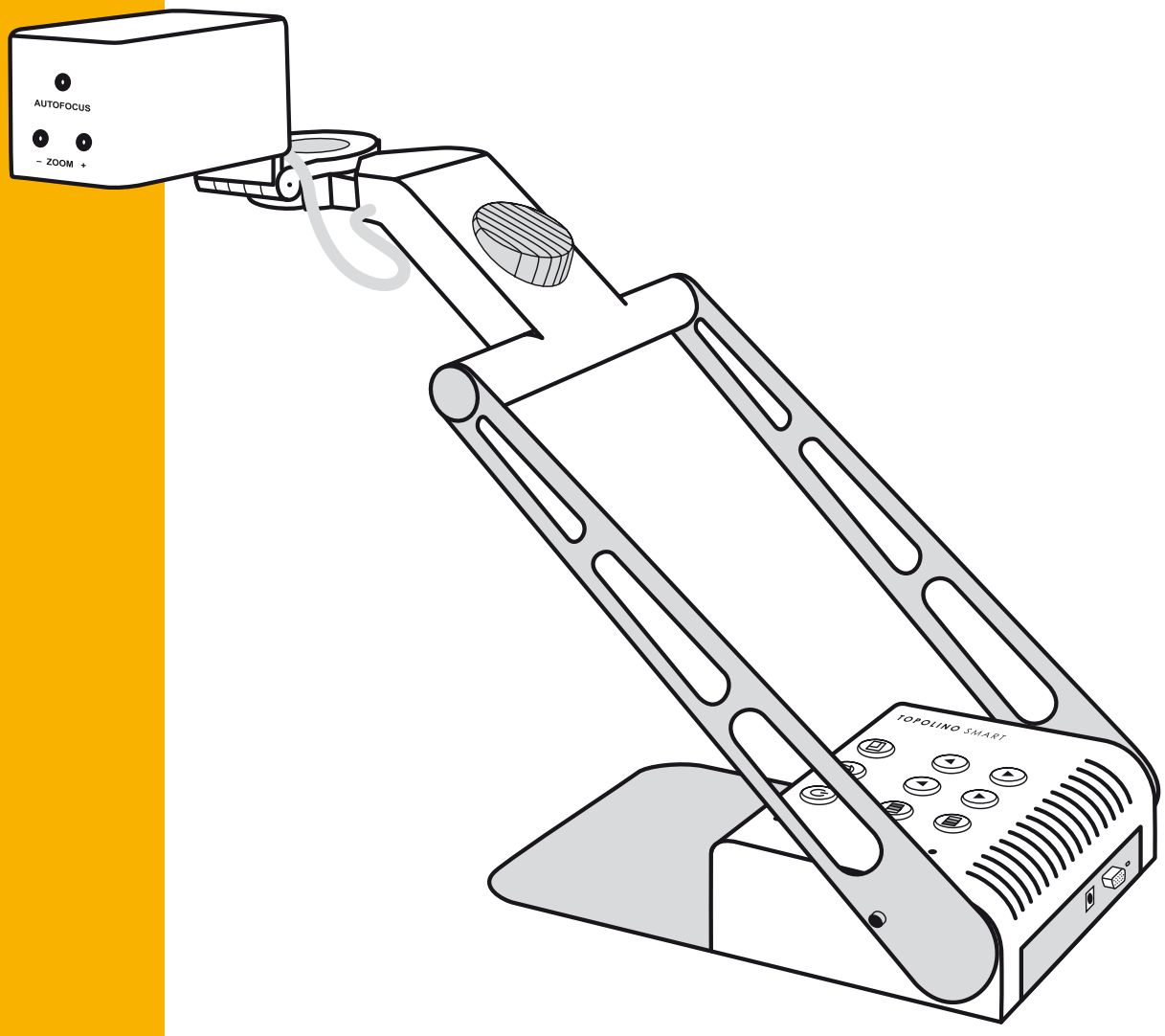
User manual and medical device booklet

topolino smart



REINECKER REHA-TECHNIK

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REINECKER REHA-TECHNIK

Konformitätserklärung

Declaration of conformity

Wir erklären in alleiniger Verantwortung, dass das Produkt
We declare under our sole responsibility that the product

TOPOLINO smart

auf das sich diese Erklärung bezieht, mit der /den folgenden Normen oder normatischen Dokumenten übereinstimmt.
to which this declaration relates is in conformity with the following directives.

Es entspricht damit den Bestimmungen der folgenden Richtlinie:
It corresponds to the rules of the following directives:

Richtlinie 93/42/EWG
des Rates vom 14. Juni 1993 über Medizinprodukte
Klasse I nach Anhang VII

Council directive 93/42/EEC
of 14th June 1993 concerning medical devices
Class I / Annexe VII

Die CE– Kennzeichnung auf dem Gerät dokumentiert diese Übereinstimmung.
The CE mark on the system points out this accordance.

Alsbach-Hähnlein,

15.08.2010

.....
Ort und Datum der Ausstellung
Place and date of issue

M. Reinecker Geschäftsführer
M. Reinecker General Manager

.....
Name und Unterschrift des Befugten
Name and signature of the authorized person

I. General information

Important notes for the use of the reading system topolino smart!

Please read carefully!

1. Notes on the electromagnetic compatibility (EMV)

The opto-electronic reading system is suited for use in all set-ups including connection to the public mains supply.
The opto-electronic reading system is designed for use in the indicated electromagnetic environment. The customer or user should ensure the use in the indicated environment.
The opto-electronic reading system operates on HF-Energy exclusively for its own function. Therefore the emitted interference of high frequency disturbances is very low and the possibility of disturbing other appliances operated close-by is improbable.
When operating the system simultaneously with other systems however, the possibility of disturbances of the system or other systems should not be overlooked. For this reason you should ensure that the system is not placed directly beside or on top of another system.
If the set-up of system in the proximity of medical, analogical measuring devices cannot be avoided, the operator of these devices has to be informed that it is necessary to observe the performance of the system to control the conventional use of the system in the chosen set-up.
Electronic devices are sensitive towards electric discharge and towards highfrequency electro-magnetic fields.
In order to avoid high-frequency disturbances the operator should respect a minimum distance of one metre to portable and mobile HF-telecommunication devices.

2. Combination with other products

Warning: The camera system may not be located directly beside or next to another system. With the enterprise in direct proximity of another equipment an observation of the equipment results is necessary, in order to ensure the intended equipment use in the selected arrangement.

3. Product description

Topolino smart is an opto-electronic reading and camera system to increase text and images. They are being captured by the integrated camera and then presented on a direct attached monitor or over a PC or a Notebook system.

4. Purpose

Reading systems are medical devices to assist the reading of printed text.
Visually impaired people compensate for their deficiency or illness by using this device.

5. Product life

Seven years from date of production, assuming recommended maintenance work is carried out.

6. Instructions for installation

Topolino smart has to be installed and used in closed an dry rooms only. It is not allowed to connect topolino smart with other systems, which serve life sustainment, to the same electric circuit.

This device must not be operated in explosion-endangered environments. This opto-electronic device should only be installed in conjunction with modern electrical circuitry. It is a medical device, class II. The openings in the casing ensure optimum cooling and must not be covered.

7. Cleaning of the system

Topolino smart has to be disconnected from the power supply before cleaning. No liquids must reach the interior of the system whilst cleaning.

8. Special advice for the transport and storage

For reasons of safety, the unit shall only be transported and stored in the original packing. The unit must be stored in dry and closed rooms in the original packing.
The following conditions and storage have to be respected:

- Temperature range -10 to +50°
- Relative humidity 30% to 80%
- Air pressure 700-1000 hPa

9. Further use/ installation and maintenance

The devices may be technically maintained and preprocessed by Reinecker Reha-Technik GmbH only. The further use may only be effected after a safety related check-up by Reinecker Reha-Technik GmbH. Reinstatement is only authorized and may take place after the system has been cleaned, disinfected and the technical safety check has been conducted.

10. Security checks (§6 MP-BetreibV)

Security checks must only be executed by technicians of Reinecker Reha-Technik GmbH authorized by the manufacturer. Reinecker Reha-Technik GmbH does not rule deadlines for safety checks.
The statements made in §6 MP-Betreiber-Verordnung regarding deadlines - every two years at the last - are recommended. Statements of the safety condition of a device will be made whilst safety checking according to the standard VDE 0751.

11. Precautions by alteration of the performance of the system

Should any of the technical features be changed, the system cannot be put back into operation. Refer directly to your dealer or to Reinecker Reha-Technik GmbH headquarters service centre.

Please note: Operation of the system with any other accessories than the ones provided, can lead to a higher emission and/ or a reduced immunity.

12. Disposal of the unit according to EU directive 2002/96/EG

topolino smart contains electronic components. In order to avoid damage to the environment or environmental hazard the disposal of the unit has to be carried out according to valid regulations.

13. Storage of the user manual

The user manual is part of the reading system. The booklet has to be looked after and kept save.

II. Instructions for the reading system topolino smart

1. Including in the delivery

Basic system

Carrier bag incl. Shoulder strap
(the carrier bag may be carried in your hands or over your shoulder)

Power supply unit 12V DC 2,5A

USB-cable

User manual / Software

The carrier bag may be carried in your hands or over your shoulder

2. Installation of the device

Take the camera system out of the carrier bag and install according to the demonstrated steps.

Folded topolino smart in transport position	Erect camera stand until lock button (see picture) is set off and the arm is completely locked.

Swivel camera head by 180° above.

In order to put the camera into the final reading position it has to be turned upwards by 270° according to the picture above and the camera also has to be aligned to the reading material.

2.1 Position reading camera

Turn the head of the camera vertically downwards so that the camera turns in direction of the reading board. (The hinges of the camera housing have to be directed towards the

base of the reading material!
This camera position is suitable for reading and viewing of documents.
Stand illumination turns on automatically
.

2.2 Position room camera

Swivel the camera head horizontally.
Stand illumination turns off automatically.

Note:
The swivel range of the camera is 270° in the reading and room camera mode.

3. Connecting of the camera system

3.1 Power plug (12V DC 2,5A)

Put the plug into an earth contact type or euro wall socket.

Connect the DC plug with the 12V plug socket.

Caution: Please only use the power plug included in the delivery. If you use another plug the guarantee will extinguish.

3.2 VGA-connection

Connection of 15pin VGA plug for CRT or TFT screen.

3.3 USB-connection

Connection for USB-plug (Mini-USB) to PC/Notebook.

Attention:
Unplug by pulling the plug and not by pulling the cable!

4. Description of the operating-elements

4.1 Control panel of the top side of the device

Brightness

By pressing the keys you regulate the brightness of the image depiction (intensity of the illumination).

Saturation and contrast

By pressing the keys the contrast of the image changes.

In the colour mode: regulation of the colour saturation
In the artificial colour mode: regulation of the contrast

Colour mode

Switching from real colours to artificial colours.

Artificial colours

Switching of the artificial colours
There are different combinations of artificial colours available: black/white negative, black/white positive, green/black negative, yellow/black negative , yellow/ blue negative

Resolution

Switching of the screen resolution between 1440 x 900, 1920 x 1080, 1280 x 1024 and 1600 x 1200 pixel

Note: during the adjustment the corresponding parameter display will only be shown in the screen operation.

Illumination

Stand illumination on/off: By pressing the key stand “illumination”, the illumination

will either switch on or off. A camera change of position from reading and distance viewing mode turns on the lights automatically.

Power plug on/ off

Switches the system and/ or off.

Warning: For running the topolino smart always use the mains switch which is contained in the delivery!

Saving of the adjustments last used

When switching on topolino smart you will see the image with the last used adjustments and magnifications.

4.2 Control elements on the back of the camera

Autofocus

By using the AF key the autofucus will be switched on/ off. The status of the autofocus-function is displayed for approx. 4 seconds at the right bottom of the screen. When autofocus is switched on, the camera adjust the picture definition within the image scale.

Overview mode

If you are working with a larger magnification, and you do not know which area of the reading material and/ or which part of the room you have been magnified, this function will give you an overview of the magnified area.

If a larger magnification is needed hold down the AF key until „overview mode“ is being displayed at the left bottom of the screen and the picture on the screen is being reduced.

The crosshair in the middle of the picture serves as a overview, to see which part of the picture is currently being magnified. When you release the AF key, you will return to the initial mode with the current selected modus.

Zoom + / -

The magnification can be adjusted continuously by using the keys +/- .

Mirror image

The picture display on the monitor can be flipped vertically. To do so, press and hold down

the zoom + and zoom – keys, until the display indicates briefly a sign „mirror on“ and the image is mirrored automatically.

If you want to return to the normal operating state, press and hold down both keys again until the display indicates a sign „mirror out“ and the image will be back to its normal operating state.

5. Starting up the topolino smart

5.1 Mains operation

As described, connect to public mains, press the mains key on/ off. Afterwards, when the green LED key shines, the device is ready for work.

2.2 Rechargeable battery operation

Please make sure that the power supply is connected and the battery is charged.

Press the mains key and the device is ready to work.

Red LED shines: The rechargeable battery will work for another 10 minutes.

Red LED flashes:The rechargeable battery will be switched off, you may not longer use the rechargeable battery. The Battery has to be charged again.

Charging rechargeable battery

Red LED shines
Connect mains power adaptor
Switch off device for charging or use it without illumination
Yellow LED shines
Rechargeable battery will be charged, yellow LED will extinguish when charging is completed
Camera system is ready to work with rechargeable battery

Operating topolino smart during the charging process

The battery will be charged whilst operating the system, when the lighting has been switched off by the key „illumination stand on/ off“.

Operating time when rechargeable battery is completely charged

Approximately 3 hours when illuminated
Charging time of the rechargeable batteries approximately 4.5 hours

5.3 LED display

Green LED shines: operation display(device is switched on)

Yellow LED shines: Display for charging of the rechargeable battery
Red LED shines: rechargeable battery is ready to work for another 10 minutes only

5.4 Automatic switching from mains operation to rechargeable battery operation

When topolino smart is connected directly to the mains power, the system switches automatically to the mains power operation- this although happens when the system is in battery operation whilst connecting it.

5.5 Handling of the rechargeable battery

Operation of rechargeable battery

Attention: In order to assure a long life span of the rechargeable battery you must stick to the instruction for charging and operating the batteries:

The charging of the battery must only be finished after all LED have extinguished.

If Topolino smart should not be used for a longer time, please charge the battery completely. Even if switched off topolino smart may unload, which may cause total discharge. This should be avoided because it might damage the battery.

Always check the charging conditions of the battery and charge- if necessary - as described in “charging rechargeable battery” on page 15.

Changing the rechargeable battery

The rechargeable battery may only be exchanged by Reinecker Reha-Technik GmbH or by an authorized speciality retailer.
You must only use the original rechargeable battery. They can be ordered with Reinecker Reha-Technik GmbH. Article number: 00354002
The usage of other rechargeable batteries will damage topolino smart.
All warranties for defects will be excluded.

Liability for battery defects

Batteries are a natural subject to wear and tear and are therefore not included in the general liability for material defects.

6. Operation of the camery system as reading camera with - CRT- oder TFT-screen

Installation of the camera stand as described in „Installation of the device“ on page 8.

Connect CRT or TFT screen to VGA socket and switch on the screen
Connect camera system by means of power supply to 230 V network or use the camera system with its rechargeable battery
Switch on the camera system
Put documents on the reading table
If necessary switch on illumination of the camera system
Documents will be depicted to a larger scale
Topolino smart can be operated over the keys integrated on the system

7. Operating of the camera system on the computer or notebook

The data of the reading system will be transmitted via a USB-port directly to the computer. Operation is controlled over the integrated keys on the system or by the software.

To achieve the optimal image display by moving objects or submittals, the following **minimum requirements** are recommended:

Processor Intel P4 3 Ghz

Memory 512 MB RAM

Drive: CD- or DVD drive

Graphic card with 32 MB and Overlay

Operating system Windows XP, Windows 2000, Windows Vista or Windows 7

7.1 Installation of the software to the PC or notebook

To install the software on your PC or notebook place the CD, which is included in the scope of delivery, into your computer's CD drive.

In case the CD does not open automatically, go to your desktop folder and select your CD drive, to open the CD.

To run the CD start the file „setup“.

Note: If a warning window of the manufacturer and producer of this software appears, click „yes“.

To choose the language settings for the installation and the user interface of the software, a window will appear at first.

When you have selected one language and confirmed your selection with „OK“, you will be given a welcome note from the installation wizard. Please click „continue“ to continue with installation.

In the next window a directory must be laid down, in which the software has to be installed on to. By default, the directory „C:\Program Files\topolino“ will be set up. However, if you wish to install the software into another folder, please click „search“ and pick a directory of your choice. To continue installation click the "continue" key.

Note: In the bottom left hand part of the window display, the necessary fixed-disk storage and the available memory is indicated. Please make sure that adequate disk space is available for installation.

In the next window a new directory is determined, in which the snapshots will be stored. When you tick „create a subfolder“, a subdirectory will be created in the standard directory. To continue installation click the "continue" key.

In the next window it is possible to record video sequences. To activate this function, you have to tick “activate”. To continue installation click the "continue" key.

During the next step the name of the start menu folder under Windows XP will be assigned. Here it is recommended to maintain the name “topolino” in order to avoid any possibility of confusion.
To start installation click “installation”.

As soon as the installation process is completed, the following confirmation of the completion of the installation is shown.
Click the „continue“ key in order to go to the next step.

Finally you finish the installation wizard by clicking “complete”.

Installation of your topolino-software is now completed and the program can be started and accessed through your window menu bar „Start\Programme\topolino“.

7.2 Connecting topolino smart to a computer

Connect the reading system by means of the power supply to 230 V network or operate with battery power.

Start up your computer

Connect topolino smart to the computer by using the USB cable, which is included in the scope of delivery.

Switch on the reading system topolino smart

Go to „Start\Program\topolino“ to start up the topolino-software on your computer.

Now you may see and look at your templates as well as parts of the chosen room on the computer monitor and operate the system either over the corresponding keys on the system (see also description of the operating-elements) or the installed topolino-software.

7.3 Operating of the system through the topolino-software

Description of the software- menu bar

File

Save image: With this menu item the currently shown picture displayed on the monitor can be saved as an image file. These images may be saved in the default directory or in any folder of your choice.

Print: The currently shown picture on the monitor can now be printed over the menu item.

Stop: With this menu item the program can be terminated.

Camera

Zoom: Zoom in/ out the chosen templates with this menu item.

Focus: When using this menu item you can increase and decrease the picture definition or automaticaly set the focus (Autofocus).

Show menu: This menu item is deactivated.

90° rotate left: With this menu item you are able to twist the image display on your monitor 180 degrees to the left. Click once more on the entry and the picture will turn by further 90 degrees.

Miscolours: With this menu item the miscolours can be activated and/ or deactivated. If this option is activated, the current selected text- and background colours can be exchanged by selecting „invert“.

To switch to the the next miscolours-combination, select **„Change colour mode“** .

Camera mode: This function is deactivated, as the switching between reading and

distance viewing mode by topolino smart automatically takes place when the camera position changes.

Ruler/Masks: With the menu item „switch mode“ you can activate the option line coverage. When clicking once more the „switch mode“, the line coverage is deactivated and the the line marker will be activated. With „delete/ reset“ you will return to the normal mode.

Image Mode: With this menu item you can choose from several different resolution capabilities.

Image settings: With this menu item the settings for brightness and the colour saturation can be carried out.

Settings

Show toolbar: The toolbar which is located under the menubar, can be selectively shown or hidden with this menu bar.

Show picture-frequency: the adjusted picture-frequency (fps) in the upper right corner of the monitor, can be selectively shown or hidden with this menu bar.

Big buttons / large font : With this menu bar the menu font and the keyboard buttons can be displayed small or large on the user interface.

Always on top: When this option is activated and even other applications may be started, the topolino-software is always kept on top of the monitor.

Scale1:1, adapting to fit the size of the window , adapting to the dimensions of the window : With this menu item the image representations on the monitor can individually be adjusted.

Language: Over the menu entry you can choose between four different menu languages (English, German, French and Dutch).

Directshow CSC: With this menu bar you can choose between four possibilities for image transmission (Auto, AVI Decompressor, Colour Space Converter, None). Here it is recommended to set the transferring images to automatic “AF”.

Help

Keyboad-Shortcut : With this menu bar you can view the list of all keyboard shortcuts. When using the shortcuts you get quicker access to your desired functions and/ or command.

Information: With this menu bar you will receive further information about the product, the current used software version as well as information about the manufacturer of the system and its address.

7.4 Description of the toolbar

1) Save picture : The displayed camera image can be saved as an image file. These pictures can be saved in the default directory as well as any directory you desire.

2) Record start : Will record a video sequence.
Note: This function is only available, when (the option) “record” was activated during installation!
For recording click on the icon and select the desired file name and location.

Note: The button blinks during recording.
Click the symbol again and recording will stop.

3 + 4) Zoom Plus/Zoom Minus: zoom in/out the image representation .

6) Autofocus: Over the symbol “Autofocus” the image sharpness can automatically be adjusted.
The camera adopts automatically to the best appropriate sharpness setting within your

image scale. At the highest magnification, the camera provides automatically a sharp image, when the hight level of the templates is approx. 8 cm in the reading and viewing mode.

5 + 7) Focus Plus, Focus Minus: Alternatively to the autofocus, the image sharpness can be adjusted manually through the toolbar buttons “Focus plus” and “Focus minus”.

8) Artificial colours/ Full colour mode: Switching between artificial colours/ full colour mode.

9) Invert: (only clickable in artificial colour mode)**:** exchange of background and foreground colours .

10) Change color mode: (only clickable in artificial colour mode)**:** Move to the next artificial colour combination.

11) Camera modes : This function is deactivated, as the switching between reading and distance viewing mode by topolino smart automatically takes place when the camera position changes.

12) Ruler-/Masks-Modus switch: Start/ switch between the options: vertical ruler, horizontal ruler, vertical line coverage and hotizontal line coverage.

13) Ruler/Masks reverse Deactivate the ruler and mask.

14 + 15) Ruler/Masks to the left/ downwards, Ruler/Masks to the right / upwards: Move the ruler and/ or the mask (line marker) horizontal and vertical .

16) Camera image On/Off: Over the browse button the camera picture can be selectively shown or hidden.

8. Technical Data

• Magnification:
19"W TFT-screen, resolution 1440 x 900 pixel: approx. 2 - 65x
22"W TFT-screen, resolution 1440 x 900 pixel: approx. 2,3 - 76x
24"W TFT-screen, resolution 1440 x 900 pixel: approx. 2,6 - 86x
24"W TFT-screen, resolution 1920 x 1080 pixel: approx. 2,7 - 56x

• Weight: approx. 2,3 kg

• Measurements (WxHxD):
built: 45 x 19 x 45 cm
assembled : 36 x 19 x 10 cm

• Electricity supply :
Input: 100-240 VAC 50/60 Hz / 700mA,
Output: 12 VDC 2,5 A (in connection with power supply)

• Power consumption : approx. 20 Watt

• Battery: Li-Ion 7,2 V 6600 mAh, Typ: LCR186500
• Battery charging time: approx. 3,5 hours
• Battery operating time (with illumination): approx. 4 hours
• Video recording: approx. 6 MB per second by 1920 x 1072 pixel resolution

14. Conditions of warranty

(Valid only within the European Union)

1. The warranty period is 24 months commencing with the date of dispatch.
The time of the delivery is confirmed by signature on the delivery note and/or by the data listed in the user manual.

2. All parts that have been replaced when repairing the unit will automatically become property of Reinecker Reha-Technik GmbH.

3. The warranty and liability for defects does not include damages caused by improper treatment or by non-observance of the user-manual.

4.Interventions from persons other than Reinecker Reha-Technik authorized specialists may lead to invalidity of warranty if the damage is caused by this intervention.

5. Exempt from the warranty and liability for defects are the light bulbs, for lighting the reading table and other parts subject to wear and tear.

6. If a warranty claim is necessary, the unit must be returned in the original packaging. We will not take responsibility for any transportation cost.

Our general trading conditions apply. .

15. Internationale conditions of warranty

When a product is bought abroad and repair is needed, please contact the retailer located in your country.

Our retailer:

The time of the delivery is confirmed by signature on the delivery note and/or. by the data listed in the user manual.

9. Product Identity

Type: topolino smart

Serial-Number: _____

Manufacturer: Reinecker Reha-Technik GmbH

Supplier: _____

Year of purchase: _____

*Operator:

1.	_____	6.	_____
2.	_____	7.	_____
3.	_____	8.	_____
4.	_____	9.	_____
5.	_____	10.	_____

Final examination: _____

Date of despatch: _____

Power supply: 100 VAC – 240 VAC 50/60 Hz

over plug- in power supply: 12 VDC 2,5 A Typ: FW7362M/12

Power consumption: ca. 20 Watt

Installed by: _____

**First safety check: _____

* Attention: When changing of operator, the new operator shall be named in the corresponding column.

** If re-using the unit, a new safety check is required!

Zentrale Deutschland
Entwicklung, Produktion, Vertrieb,
Kundenberatung und Kundendienste

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Mobilfunkpreis max. 42 ct/min

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Bitte wenden Sie sich bei Fragen oder einem Servicefall direkt an unser Hauptwerk in Alsbach-Hähnlein oder an eine unserer Niederlassungen.

Bei im Ausland erworbenen Produkten kontaktieren Sie im Servicefall bitte Ihren dort ansässigen Händler.

In case service is necessary, please contact your authorized distributor.

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REINECKER REHA-TECHNIK